

Work Order ID 139766

Monday, December 07, 2015 12:31:03 PM

139766

PRELIMINARY ISSUE

Page 1

Item ID: D4095-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Aft
Start Date: 12/14/2015 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 12/18/2015 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: JA Date: 15.12.07 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	B <u>C</u> <u>JA</u>								
100	FLOW WATER JET	0.00							
100									
Waterjet	Memo	0.01							
FLOW CNC Waterjet	1-Cut as per Dwg (D4095-3) Dwg Rev: <u>C</u> Prog Rev: <u>C</u> 2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.00							
Quality Control									

DAS
38
9-88

FEB 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC Brake NC	NC BRAKE Memo 1- bend section C-C first 2- Form on Brake as per Dwg D4095 using Jigs DT 8179 and DT 8155 3- Form Joggles (2) as per Dwg D4095 on brake using Jig DT 8157	0.00 0.00			DAS 30 9-89	4			FEB 11 2016
140 *140* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo Ensure joggle as per dwg D4095	0.00 0.00				(21)			DAS 38 9-89 FEB 11 2016
150 *150* autoweld 1 Automated Welding 1	Weld per dwg & QSI004 4.5 Large Fab Memo ***SEE NOTE 10 FOR SURFACE BUILDUP*** 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: 78 134139	0.00 0.00				4		16-03-29 JAL/cr	



PTO

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: <u>139766</u> Part No. <u>DY095-043</u> NCR No. _____		DISPOSITION Rework ☒ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table border="0"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																															
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Description Work Order Deviation				Disposition																																																																			
Buildup hard surfacing 0.17 to 0.20 thick using 8259 rod per QSI 004 section 4.5. DAS 9 9-89				Acceptable minor deviation. Modified wearplate is test fit on a skid tube without issue. Testing per DR 1062 shows that 8259 rod is more durable than existing rod.																																																																			
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC10- Inspect visual per QSI004- ground welds	0.00							
160									DAS
QC	Memo	0.00				(4)	16-03-29		9
Quality Control									9-89
170	QC5- Inspect part completeness to step on W/O	0.00							
170									DAS
QC	Memo	0.00				(4)	16-03-29		9
Quality Control									9-89
180		0.00							
180									DAS
HandFinish	Memo	0.00				4			41
Hand Finishing	COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER DWG A/R ROCKGUARD BATCH: <u>134278</u>								9-89 16-3-29

POSITIVE RECALL

EFFECTIVE 1/5/12 BY AUTH

RELEASED DATE

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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190 *190* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				(4)			DAS 38 9-89 APR 02 2016
200 *200* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP-002</u> Memo LOCATION : FP002	0.00 0.00				X4			DAS 15 9-89 APR 04 2016
210 *210* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.01				MCS			APR 05 2016

MCS APR 04 2016

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Picklist Print

Monday, December 07, 2015 12:31:08 PM

Page 1

Work Order ID: 139766

139766

Parent Item: D4095-043

D4095-043

Parent Item Name: Wearplate Aft

Start Date: 12/14/2015

Required Date: 12/18/2015

Start Qty: 4.00

Required Qty: 4.00

Comments:

IPP Rev:A new issue DD 10.04.26 verified by:EC
15.10.29 AUTOMATED WELDING DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased		No		100	sf	186.4500	2.275	9.578947			

M304S16GA

304/316 Sheet .063

12/16/02/08

Location

Loc Qty

Loc Code

MAT019

186.45

m132797

4.45

m132835

22

m133511

160

134067

7.2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

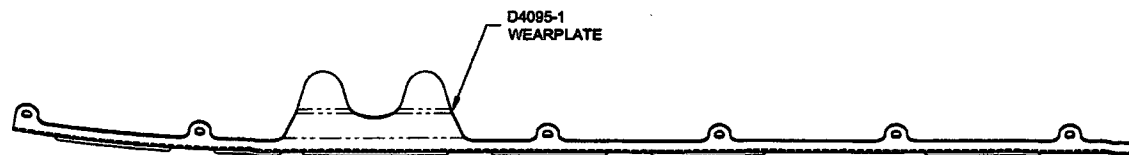
ITEM	QTY -041	QTY -043	QTY -045	QTY -047	QTY -049	QTY -051	PART NUMBER	DESCRIPTION
1	X						D4095-041	WEARPLATE ASSEMBLY
2		X					D4095-043	WEARPLATE ASSEMBLY
3			X				D4095-045	WEARPLATE ASSEMBLY
4				X			D4095-047	WEARPAD ASSEMBLY
5					X		D4095-049	WEARPAD ASSEMBLY
6						X	D4095-051	WEARPAD ASSEMBLY
7	1						D4095-1	WEARPLATE
8		1					D4095-3	WEARPLATE
9			1				D4095-5	WEARPLATE
10				1			D4095-7	WEARPAD
11					1		D4095-9	WEARPAD
12						1	D4095-11	WEARPAD

D4095-041-043-045-047-049-051 NOTES:

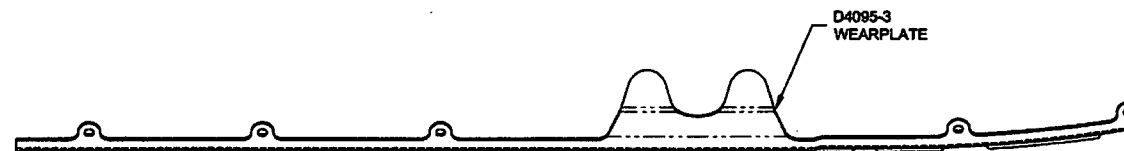
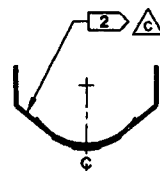
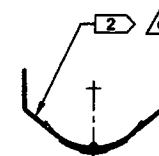
- 1) MATERIAL: N/A
- 2) FINISH: COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING 0.02-0.04 THICK, PER DART QSI 005 4.9
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4095-0XX" AND B/N "BXXXXX" USING REMOVABLE TAG PER QSI 044 6.8
- 7) WEIGHT: D4095-041 = 3.08 lbs; D4095-043 = 3.08 lbs; D4095-045 = 2.00 lbs; D4095-047 = 0.48 lbs; D4095-049 = 0.42 lbs; D4095-051 = 0.37 lbs
- 8) PARTS ARE SYMMETRIC ABOUT CENTERLINE

C	8259 WELD ROD WAS 20598, 0.20 WELD THICKNESS WAS 0.25, MOVE DRAIN HOLE IN -1/3, 0.9 WAS 2.00 (TYPO B4-9), ADJUST TOL. FOR MANUFACTURABILITY, NOTE 2 NOW REF'S QSI 005 4.9, UPDATE MAT'L SPEC	CP	16.01.06
B	REVISED D4095-1-1F/3/3F; 4715 PLUS ONE ROCK-GUARD REPLACES D4095-1-1/3; ADDED D4095-5/-7 -8/-11; REVISED HARDCOAT DESIGN; REVISED NOTE 2	XDF	11.10.18
A	NEW ISSUE	MB	10.04.20
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE USA, INC	
DRAWN		EUGENE, OR	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D4095	SHEET 1 OF 9
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE	NTS
DATE	16.01.06	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY FORM OR BY ANY MEANS WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2016-01-11
ECN 16-504



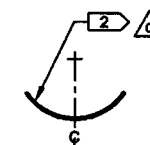
D4095-041 WEARPLATE ASSEMBLY



D4095-043 WEARPLATE ASSEMBLY

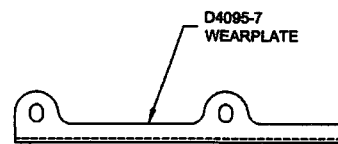


D4095-045 WEARPLATE ASSEMBLY

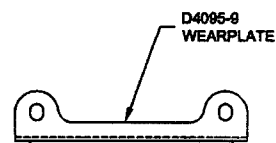
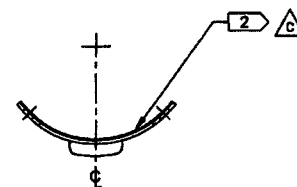


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2016-01-11

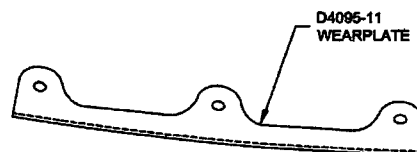
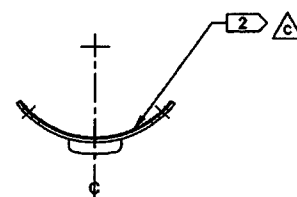
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MFG. APPR.		D4095	SHEET 2 OF 9
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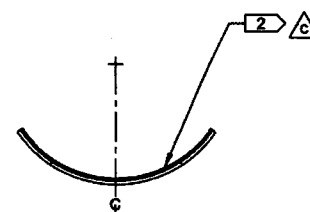
D4095-047 WEAR PAD ASSEMBLY



D4095-049 WEAR PAD ASSEMBLY

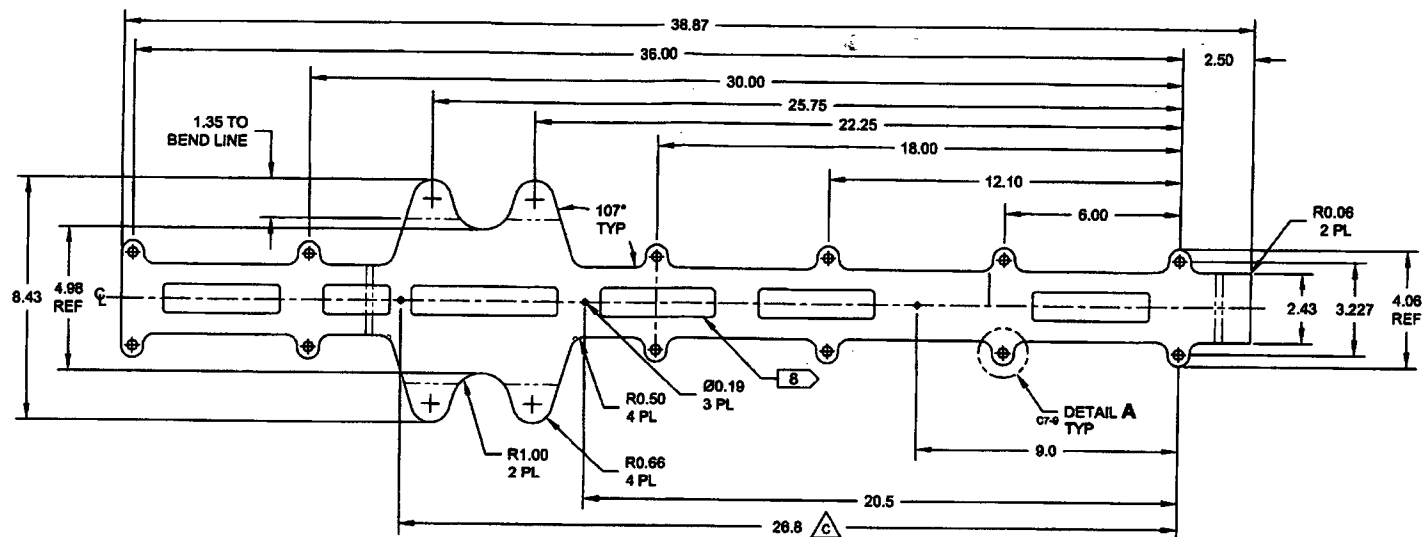


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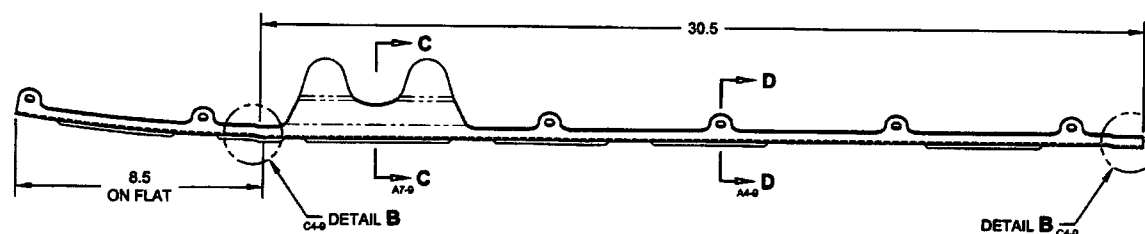


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D4095-1F FLAT PATTERN 1



D4095-1 BENDING DETAIL
(MAKE FROM D4095-1F)

D4095-1 NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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2016-01-11

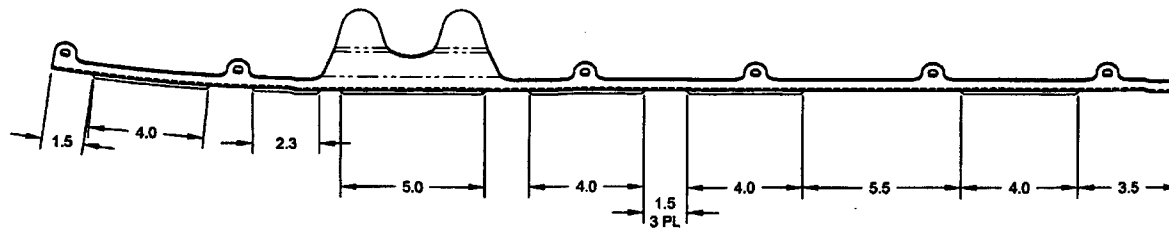
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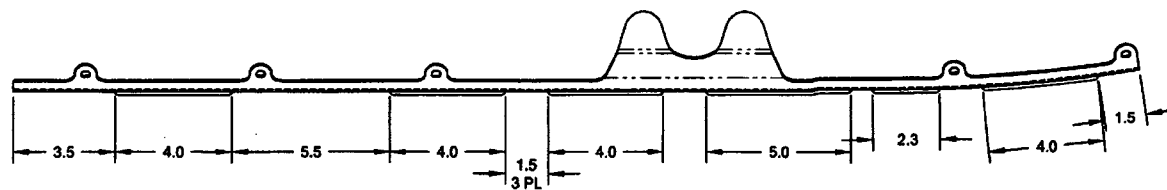
9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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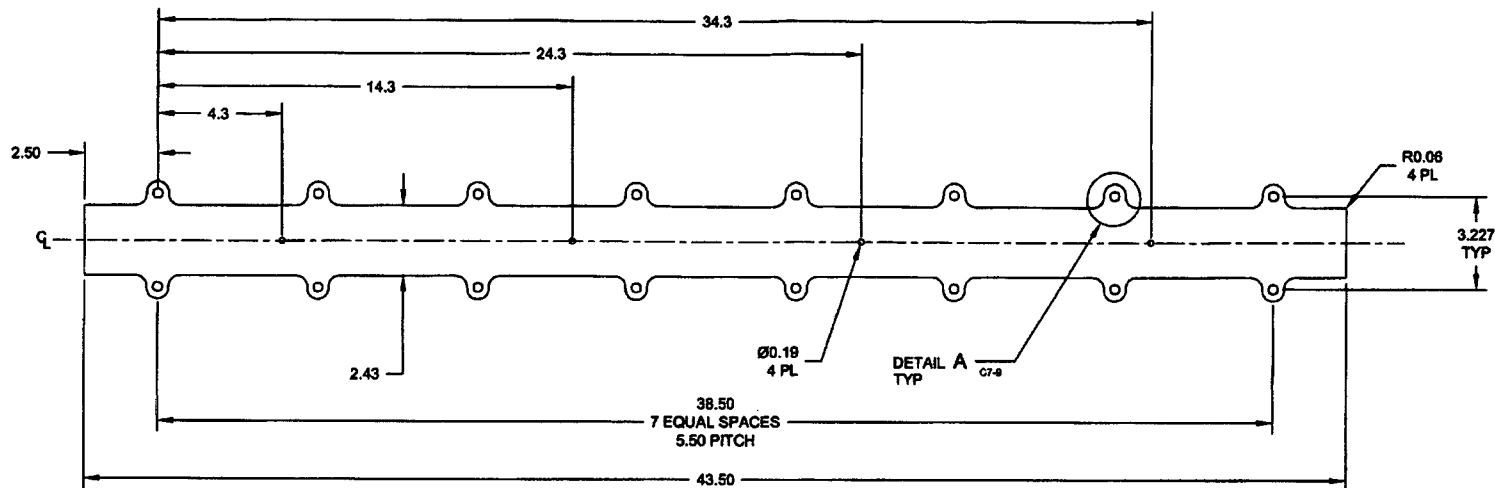
D4095-1 WELDING DETAIL



D4095-3 WELDING DETAIL

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D4095-5F FLAT PATTERN 1



D4095-5 BENDING DETAIL
(MAKE FROM D4095-5F)

D4095-5 NOTES:

1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5058 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX

6) IDENTIFICATION: N/A

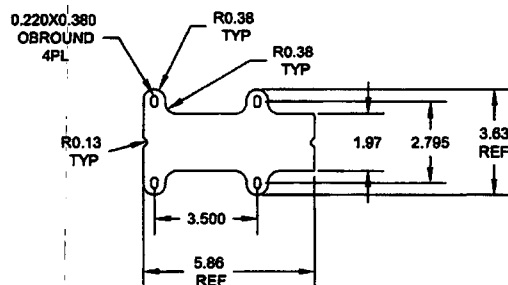
7) WEIGHT: N/A

8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5

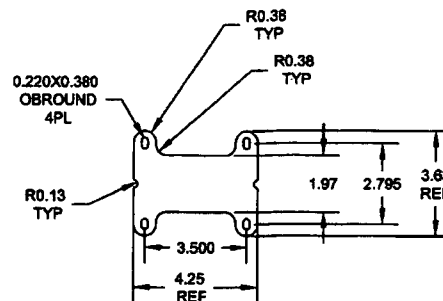
9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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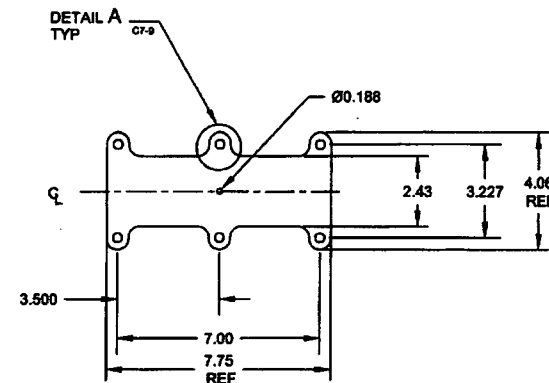
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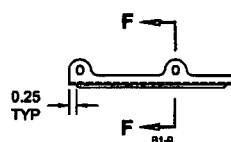
D4095-7F FLAT PATTERN 1



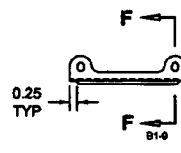
D4095-9F FLAT PATTERN 1



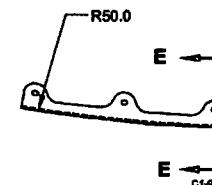
D4095-11F FLAT PATTERN 1



D4095-7 LONGITUDINAL BEND
(MADE FROM D4095-7F)



D4095-9 LONGITUDINAL BEND
(MADE FROM D4095-9F)



D4095-11 BENDING DETAIL
(MAKE FROM D4095-11F)

D4095-7-9-11 NOTES:

1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240
OR ASME SA240 REF DART MATERIAL SPEC M304S16GA

2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX

6) IDENTIFICATION: N/A

7) WEIGHT: N/A

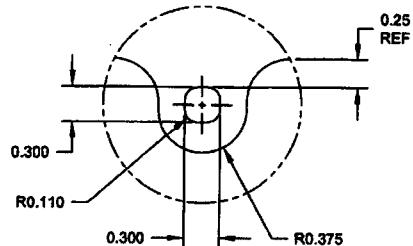
8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5

9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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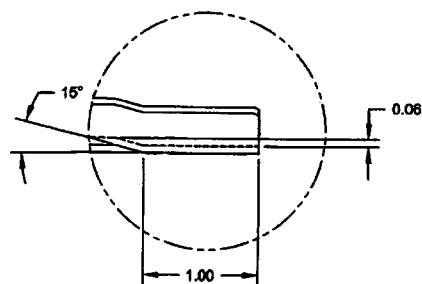
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DETAIL A: TAB DETAIL

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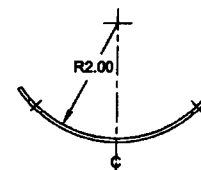
C3-3
C6-6
D3-7
D2-6



DETAIL B: JOGGLE DETAIL

SCALE 4X

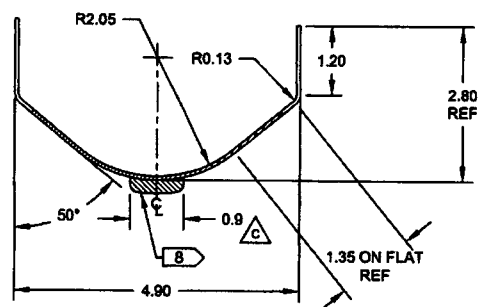
B2-4
B6-4
B3-6
B2-7



SECTION E-E

SCALE 2X

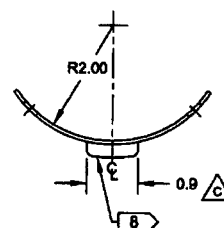
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SECTION C-C

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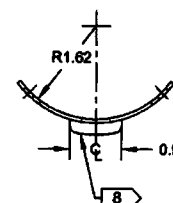
B6-4
B4-5



SECTION D-D

SCALE 2X

B4-4
B3-5



SECTION F-F

SCALE 2X

B6-6
B7-6

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DART AEROSPACE LTD	Work Order:	139766
Description: wear plate Aft	Part Number:	4095-043
Inspection Dwg: 4095	Rev: C	Page 1 of 1

INSPECTION SHEET

[illegible]

Measured by:	DC	Checked by:	38 8-80	QC Inspector:	
Date:	16/02/08	Date:	FEB 08 2016	Date:	

Engineering Approval: (If necessary)		Date:	
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Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	